CSE 4317: Computer System Design Project II
Fall 2020

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Office Hours: Email me for in-person or Teams meeting

Section Information: CSE 4317-003/902 (lecture), CSE 4317-004/903 (lab)

Time and Place of Class Meetings:	MWF	10:00 – 10:50 AM	CSE 4317-003/902 (Lecture)
	F	11:00 – 11:50 AM	CSE 4317-010/903 (Lab)

Description of Course Content: The purpose of this class is to give you some "close to real world" experience in developing real products, the right way. You will learn a lot about the development process and discover some interesting things about yourself along the way! This is the CSE capstone course, where you put it all together before you tackle your role in industry after leaving UTA. We will study and practice agile development methodologies while designing and implementing exciting hardware and software projects. You will work for two semesters in teams of 4-5 students. In the first course in the sequence, CSE 4316, you will identify your team, project, and individual roles and responsibilities within the agile development framework. The project will be continued and completed, through demonstration of a working prototype, by the same team in CSE 4317 the following semester.

Student Learning Outcomes: At the conclusion of the course, comprising both CSE 4316 and CSE 4317, the student will have developed the necessary skills to work on a product design and development team by substantially completing a working prototype of a complete product. The skills required to do this include all of the technical skills that should have been assimilated thus far in the student's program of work, as well as soft skills that will be learned and/or honed during the project. The primary objective of this course is the final preparation of the student for entrance into the workplace with the ability to be productive almost immediately.

Additionally, the student will have met the following specific ABET (Accrediting Board for Engineering and Technology) Critical Assessment outcomes:

"Ability to design a system, component, or process to meet desired needs"

This outcome will be evaluated based on your performance on the key deliverables for this course: system requirements document, architectural design specification, detailed design specification, system test plan, and your final product prototype.

"Ability to function on multi-disciplinary teams"

This outcome will be evaluated using peer evaluations and instructor assessments at the end of each semester.

Other ABET outcomes that are very relevant to this class, although not specifically evaluated, are *"Understanding of professional and ethical responsibility"* and *"Ability to communicate effectively".*

Required Textbooks and Other Course Materials:

Essential Scrum: A Practical Guide to the Most Popular Agile Process by Kenneth S. Rubin

Standard Engineering Notebook, (available at UTA bookstore and BookFactory.com)

Descriptions of major assignments and examinations: This course requires both individual and team deliverables, as well a formal performance review / exit interview (in place of a final examination). Individual team deliverables include weekly status reports, regular entries in the engineering notebook. and other periodic assignments, while team deliverables include gate reviews and supporting project documentation. Assignment due dates and requirements will be announced in class and posted on the course website.

Class Preparation: This class is interaction intensive, meaning that you are expected to participate in class discussion and contribute to the learning experience. Each student is responsible for carefully reviewing all specified lecture/discussion material before each class session and being prepared for class discussion. The majority of readings are from the course textbook. Additional reading may be assigned and class handouts may be distributed, typically via the website, to supplement text readings. Presentation materials to be used for discussion of each topic in class are provided on the class website. Students will receive a grade on their participation in classroom discussions as indicated below. Topics for classroom discussions each week are as indicated on the class website, and will be updated as necessary throughout the semester. Please note that the dates indicated for discussion of a topic are for planning purposes only – the actual discussion dates may vary depending on class learning pace and other factors. Students should come to class prepared to discuss the topic during the week indicated in the reading schedule, or on a later date if deferral is necessary. This is a common occurrence in the work force. Stay flexible!

Attendance: The Senior Design curriculum places a heavy emphasis on developing professional skills and fostering effective teamwork. Success in these areas requires both attendance and punctuality, and thus, regular attendance in lectures and lab sessions is required and will be recorded. The attendance and participation component of the final grade will be computed as follows:

0-2 unexcused absences	100 points
3 unexcused absences	50 points
4 or more unexcused absences	0 points

Notes: Absence may be excused, with appropriate documentation, for illness, critical family emergencies, military service obligations, observance of major religious holidays, etc. Any request for an absence to be excused must be communicated to the instructor via email in advance or as soon as reasonably possible. Though job interviews are considered excused, the instructor must be notified of the interview before the day of class.

Grading: Final course grades will be computed as follows:

Individual Deliverables	30%
Team Deliverables	25%
Final Exam	20%
Attendance and Participation	25%

Individual deliverables may include such things as essays, individual status reports, timely upkeep of an engineering notebook, significant contributions to the documents and project, peer reviews, etc. Team deliverables include various documents for the project and in-class team presentations. Attendance at these presentations can affect the team deliverables grade. The final exam will consist of a take-home system architecture design. Attendance and participation includes random roll checks and participation in the in-class presentations and discussions.

In addition to the percentage grade calculated as above, the following other requirements must be met to pass the course, regardless of the percentage grade earned:

(1) Completion of the course in an ethical fashion. Attempting to cheat in any manner whatsoever, falsifying reports, etc. are all violations and will result in failure.

(2) Satisfactory participation as a member of the team for the whole semester. Failure to participate satisfactorily will result in a failing grade. Satisfactory participation includes attendance at team meetings and completion of individual assignments in a timely manner.

(3) Final grades for Senior Design II will be assigned only after a team has completed project wrap-up. Project wrap-up requires, at a minimum: producing a project user manual that describes any special instructions and other information that might be required to restart/resume/recover the project from where you leave it; archival of all source code, "make" files, detailed design documents and any other soft materials on a CD/DVD; and returning the team's cubicle space and surrounding area in the lab to a clean and "unused" condition such that it can be immediately occupied by another team at the beginning of the next semester. Specific, detailed wrap-up instructions will be discussed in class.

Assignment Late Policy: Assignments and deliverables will be accepted late at a penalty of 4 points per hour late.

Make-up Exams: Make-up exams will only be allowed under extraordinary circumstances and must be approved by the instructor, who's decision is final. If an exam is missed due to unavoidable circumstances, the instructor must be notified of the situation as soon as possible. Travel will not be considered as a valid excuse for missing an exam, unless for the purpose of representing the university or department. Any exams that are missed due to unexcused reasons will receive an automatic grade of zero.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified** by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

Title IX Policy: The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the

Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Michelle Willbanks, Title IX Coordinator at (817) 272-4585 or titleix@uta.edu.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at https://www.uta.edu/conduct/.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit http://www.uta.edu/news/info/campus-carry/

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at http://www.uta.edu/universitycollege/resources/index.php.

Course Schedule: An outline of the course schedule and individual topics covered is included in the course syllabus. As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911.

Course Schedule – CSE 4317 Fall 2020

Date	Day	Topic	Notes
Aug 26	Wednesday	Course introduction	Assignment: Lessons learned
Aug 28	Friday	LAB: No scheduled lab	No scheduled lab activities
Aug 31	Monday	Technical enrichment	
Sep 02	Wednesday	Technical enrichment	
Sep 04	Friday	LAB: SD I & SD II sections meet	Lessons learned due
Sep 07	Monday	DDS overview	
Sep 09	Wednesday	Technical enrichment	
Sep 11	Friday	LAB: Informal status update	**FYI: census date**
Sep 14	Monday	Acceptance Testing overview	
Sep 16	Wednesday	Technical enrichment	
Sep 18	Friday	LAB: Sprint plan presentations	Beginning of Sprint 1
Sep 21	Monday	Technical enrichment	
Sep 23	Wednesday	Technical enrichment	
Sep 25	Friday	LAB: Sprint work day	
Sep 28	Monday	Technical enrichment	
Sep 30	Wednesday	Technical enrichment	
Oct 02	Friday	LAB: Sprint work day	
Oct 05	Monday	Sprint review presentations	End of Sprint 1, DDS due
Oct 07	Wednesday	Technical enrichment	
Oct 09	Friday	LAB: Sprint plan presentations	Beginning of Sprint 2
Oct 12	Monday	Technical enrichment	
Oct 14	Wednesday	Technical enrichment	
Oct 16	Friday	LAB: Sprint work day	
Oct 19	Monday	Technical enrichment	
Oct 21	Wednesday	Technical enrichment	
Oct 23	Friday	LAB: Sprint work day	
Oct 26	Monday	Sprint review presentations	End of Sprint 2, ATP due
Oct 28	Wednesday	Technical enrichment	
Oct 30	Friday	LAB: Sprint plan presentations	Beginning of Sprint 3
Nov 02	Monday	Technical enrichment	
Nov 04	Wednesday	Technical enrichment	
Nov 06	Friday	LAB: Sprint work day	**FYI: last day to drop**
Nov 09	Monday	Technical enrichment	
Nov 11	Wednesday	Technical enrichment	
Nov 13	Friday	LAB: Sprint work day	
Nov 16	Monday	Sprint review presentations	End of Sprint 3
Nov 18	Wednesday	Technical enrichment	
Nov 20	Friday	LAB: Sprint plan presentations	Beginning of Sprint 4
Nov 23	Monday	Technical enrichment	
Nov 25	Wednesday	THANKSGIVING HOLIDAY	
Nov 27	Friday	THANKSGIVING HOLIDAY	
Nov 30	Monday	Technical enrichment	
Dec 02	Wednesday	Technical enrichment	
Dec 04	Friday	SD II FINAL DEMONSTRATIONS	Project demos and poster session in lab
Dec 07	Monday	Sprint review presentations	End of Sprint 4
Dec 09	Wednesday	Student study day	
Dec 11	Friday	Final exams	